Estimate of Facilities Storing or Using Phosmet

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The estimate of the number of facilities impacted by the deletion of phosmet from the EHS list is approximately several hundred farm chemical distributors and up to 15,000 farms and orchards that use phosmet on their crops.

Gowan Company, the sole US registrant of technical phosmet (94% active ingredient) for crop uses, does not currently manufacture phosmet in the US, but imports it. Gowan is the only company that markets this product to other companies for formulation into crop protection end-use products and phosmet technical is warehoused in only a few facilities countrywide. Because of this, most potential releases of phosmet would be associated with a formulated product. Formulated products currently registered are in the form of wettable powder, dust, emulsifiable concentrate, and soluble concentrate. Most phosmet uses for crops use the wettable powder form, which is then put into a water solution by the end user/applicator.

Gowan Company estimates that there are approximately 500 commercial storage facilities (sites that distribute farm chemicals) for phosmet in the US.[6] Phosmet's total estimated domestic usage is approximately 1, 250,000 pounds active ingredient (a.i.) for 402,000 acres treated. This averages out to about 2,000 pounds of a.i. phosmet per facility per year. Therefore, it is not likely that all 500 commercial distributors would have more than 10,000 pounds of phosmet on-site at any time. The threshold planning quantity (TPQ) for solid phosmet is 10,000 pounds if the particle size is greater than 100 microns. For phosmet powder with particle diameter less than 100 microns, the TPQ is 10 pounds. Gowan submitted data showing that for the technical phosmet (94% active ingredient) only 0.02% passed through a 180 micron size sieve for one sample and only 0.39% passed . Based on this data, CEPPO assumes that most the dust or granular products formulated from technical phosmet, also do not have any appreciable amount of phosmet particles less than 100 microns. CEPPO does not know exactly how many farm chemical distributors would have more than 10,000 pounds of a.i. phosmet at a single facility. For purposes of this analysis, a conservative assumption would be several hundred sites.

The threshold planning quantity for phosmet in solution is ten (10) pounds, so the assumption was made that all applicators (farm users) would be affected because phosmet is put into water before application on crops. Most of the acreage is treated with 3 pounds a.i. or less per application and 5 pounds a.i. per year. According to EPA's Office of Pesticide Programs, (OPP), the following crops listed in Table 1 below have a high percentage of total U.S. planted acres treated with phosmet.[1] To estimate the number

of farms applying phosmet, CEPPO assumed that the total number of farms per crop using phosmet was equal to the total number of farms per crop multiplied by the percentage of crop acres treated. The total number of farms applying phosmet is probably less than 15,000.

Table 1
Estimates of Farm/Orchard Sites That Use Phosmet as Crop Insecticide

Crop	% Acreage Treated [1] (Weighted Average)	Number of total Farms, 1997 [2]	Number of Acres Treated, 1997 [1] (Weighted Average)	Number of Farms Treated [5]
Apples	23%	28,100	120,000	6,643
Apricots	21%	3.033	4,000	637
Blueberries	20%	5,159	12,000	1,031
Pears	20%	8,062	15,000	1,612
Cherries	15%	8,423 [3, a]	17,000	1,263
Kiwifruit	14%	559	1,000	78
Nectarines	14%	2,124	5,000	297
Peaches	13%	14,459	35,000	1,880
Dry peas	13%	NA	22,000	NA
Walnuts	9%	6,850	19,000	616
Almonds	4%	6,045	19,000	242
Plums/Prunes	4%	6,585	5,000	263
Sweet Potatoes	4%	NA	3,000	NA
Pecans	3%	19,923	16,000	598
Green Peas	3%	5,824 [4]	9,000	175
Grapes	2%	19,961	13,000	399
Potatoes	1%	10,523 [4]	20,000	105
Alfalfa	0.2%	358,365 [4]	53,000	716
Cotton	0.04%	31,493 [4]	5,000	12
Total for above		535,488	393,000	16,567

a. According to reference 2 below, there were 6,387 sweet cherry and 2,805 tart cherry farms.

1. USEPA. 1999. Quantitative Usage Analysis for Phosmet. Case Number 242. PC Code 059201. June 8, 1999. Office of Pesticide Programs, Washington, DC.
http://www.epa.gov/pesticides/op/phosmet/rev_ore.pdf

2. Pollack, Susan L. September 2000. "More Land But Fewer Farms Dedicated to Fruit Production in 1997." USDA/ERS Fruit and Tree Nuts Situation and Outlook. US Department of Agriculture, Economic Research Service. http://usda.mannlib.cornell.edu/reports/erssor/specialty/fts-bb/2000/

3. USDA. 1997 Census of Agriculture- United States Data. Volume 1: Part 51, Chapter 1 United States Summary and State Data. Table 43 Specified Fruits and Nuts by Acres: 1997 and 1992 US Department of Agriculture, National Agricultural Statistics Service. http://www.nass.usda.gov/census/census97/volume1/us-51/toc97.htm

4. USDA. 1997 Census of Agriculture- United States Data. Volume 1: Part 51, Chapter 1 United States Summary and State Data. Table 42 Specified Crops by Acres Harvested: 1997 and 1992. US Department of Agriculture, National Agricultural Statistics Service. http://www.nass.usda.gov/census/census97/volume1/us-51/toc97.htm

5. Approximate n umber of farms treated assumed to equal the total number of farms per crop multiplied by the percentage of crop acres treated. Example, for apples, 28,100 x 0.23 = 6,643 farms.

6. Codrea, E. May 21, 2002. Personal communication from Elizabeth Codrea of Gowan Company to Kathleen Franklin of USEPA, OSWER, CEPPO, Washington, DC.